Applicants : Yingfu Li, et al. Attorney Docket No.: 77101-004US1 Serial No. : 10/551,452 Client Ref. No.: H310865PCTUS

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AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of claims:

- 1. (Withdrawn and Currently amended) A method for selecting an aptamer capable of binding to a target, said method comprising the steps of: i) interacting an antisense oligonucleotide having the nucleotide sequence of SEQ ID NO:1 and being adapted to be attached to a solid support with [[a]] an oligonucleotide library containing multiple oligonucleotides, each of which includes having a complementary an antisense binding domain having a sequence complementary to SEQ ID NO:1 and a random nucleotide domain, the antisense oligonucleotide and the oligonucleotides in the library [[tol] form [[a]] double stranded duplexes, said library oligonucleotide further having a random nucleotide domain; ii) immobilizing the duplexes structure on a solid support; iii) incubating the duplexes structure in the presence of the target; and iv) collecting library oligonucleotides that dissociate from the duplexes structure and bind to the target.
- 2. (Withdrawn) The method of claim 1, further comprising amplifying the library oligonucleotides collected at step iv) to provide an amplified population.
- 3. (Withdrawn) The method of claim 2 further comprising the step of sequencing clones derived from the amplified population.
- 4. (Withdrawn and Currently amended) A method for the selection of an aptamer specific for a target, said method comprising the steps of: i) providing [[a]] an oligonucleotide library containing multiple oligonucleotides, said library oligonucleotide comprising each of which includes an antisense binding domain having a sequence complementary to SEQ ID NO:1, at least one random sequence domain, a 3' primer binding domain and a 5' primer binding domain; ii) hybridizing the oligonucleotides in

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the library eligenucleotide to a biotinylated antisense oligonucleotide having the nucleotide sequence of SEQ ID NO:1 to form [[a]] duplex molecules on the beads; iv) incubating the beads with the target; v) collecting oligonucleotides which have bound to the target; and vi) amplifying the collected oligonucleotides.

5-8. (Cancelled)

- 9. (Currently amended) An aptamer selection system comprising an antisense oligonucleotide <u>having the nucleotide sequence of SEO ID NO:1</u>, and [[a]] an <u>oligonucleotide</u> library <u>containing multiple</u> oligonucleotides, said library <u>oligonucleotide</u> emprising <u>each of which includes</u> an antisense binding domain having a sequence complementary to the antisense oligonucleotide <u>SEO ID NO:1</u> and at least one random nucleotide domain, wherein said antisense oligonucleotide is adapted to be attached to a solid support.
- 10. (Currently amended) [[An]] The aptamer selection system according to claim 9, wherein each of the oligonucleotides in the library eligenucleotide further comprises a first primer binding domain at the 5' end and a second primer binding domain at the 3' end.
- 11. (Currently amended) [[An]] <u>The</u> aptamer selection system according to claim 10, further comprising a first primer capable of binding to the first primer binding domain and a second primer capable of binding to the second primer binding domain.
- (Currently amended) [[An]] The aptamer selection system according to claim 9, wherein each of the oligonucleotides in the library oligonucleotide comprises two random domains flanking the antisense binding domain.

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 (Currently amended) [[An]] The aptamer selection system according to claim 9, wherein the antisense oligonucleotide is biotinylated.

- (Currently amended) [[An]] The aptamer selection system according to claim 13, further comprising avidin agarose beads.
- 15. (Currently amended) An aptamer selection system comprising an antisense oligonucleotide comprising SEQ ID. NO. 1, a-library oligonucleotide@ an oligonucleotide library containing multiple oligonucleotides each of which includes comprising SEQ ID. NO. 2, a P1 oligonucleotide comprising SEQ ID. NO. 3, a P2 oligonucleotide comprising SEQ ID. NO. 5.
- 16. (Currently amended) [[An]] <u>The</u> aptamer selection system according to claim 10, wherein <u>each of the oligonucleotides in</u> the library oligonucleotide comprises two random domains flanking the antisense binding domain.
- 17. (Currently amended) [[An]] The aptamer selection system according to claim 11, wherein each of the oligonucleotides in the library oligonucleotide comprises two random domains flanking the antisense binding domain.
- (Currently amended) [[An]] <u>The</u> aptamer selection system according to claim 10, wherein the antisense oligonucleotide is biotinlylated.
- (Currently amended) [[An]] <u>The</u> aptamer selection system according to claim 11, wherein the antisense oligonucleotide is biotinlylated.
- (Currently amended) [[An]] <u>The</u> aptamer selection system according to claim 12, wherein the antisense oligonucleotide is biotinlylated.